

ABSTRACT OF THE DISCLOSURE

A semiconductor memory can reduce its power consumption by decreasing the activation frequency of search lines during search operation. It includes a CAM cell block for storing memory data expressing each combination of digital values stored in four memory cells in terms of a 2-bit digital value; search lines on which a digital value to be matched with a digital value stored in the memory cells is placed; a search data setting section for placing individual 1-bit digital values on the search lines connected to the memory cells to set the search data expressing a 4-bit combination of digital values in terms of the 2-bit digital value; transistors for deciding match/mismatch between the memory data and search data; and the match line 3 for outputting the decision result.